The opinion in support of the decision being entered
today was not written for publication and is
not binding precedent of the Board

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALAN S. FEITELBERG,
PAUL E. AYALA,
STEPHEN LAN-SUN HUNG,
and DAVID J. NAJEWICZ

Appeal No. 1997-4422
Application 08/269,797

ON BRIEF

Before GARRIS, WALTZ and PAWLIKOWSKI, Administrative Patent Judge.

PAWLIKOWSKI, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 24, 26-36, and 38. Claims 18-23 have been withdrawn. Claims 1-17, 25, and 37 have been canceled.

We **reverse**.

Appellants' invention is directed to a reduced ammonia power generation system. Claims 24 and 38, set forth below, are representative of the claimed subject matter:

24. A reduced ammonia power generation system comprising:
a gasification unit;
a hot gas desulfurization system arranged to receive fuel gas from said gasification unit;
at least one catalytic reactor arranged to receive fuel gas from said hot gas desulfurization system, said catalytic reactor comprising **a water-gas-shift stage** for raising the fuel gas temperature, **a methanation of CO stage** for raising the fuel gas temperature and for consuming H_2, and **an ammonia decomposition stage** for reducing the ammonia content of the fuel gas, **in that sequence**; [emphasis added]
a particulate removal system arranged to receive the reduced ammonia fuel gas from said catalytic reactor; and
a gas turbine arranged to receive the reduced ammonia fuel gas from said particulate removal system.

38. A reduced ammonia power generation system comprising:
a gasification unit;
a hot gas desulfurization system arranged to receive fuel gas from said gasification unit;
at least one catalytic reactor arranged to receive fuel gas from said hot gas desulfurization system, said catalytic reactor comprising **a water-gas-shift and methanation stage** for raising the fuel gas temperature and for consuming H2 [sic, H_2], and **an ammonia decomposition stage** for reducing the ammonia content of the fuel gas, **in that sequence**. [emphasis added]

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Aldridge et al. (Aldridge)	3,850,841	Nov. 26, 1974
Graboski et al. (Graboski)	3,904,386	Sep. 09, 1975
Suggitt et al. (Suggitt)	4,202,167	May 13, 1980
Kimura et al. (Kimura '275)	4,233,275	Nov. 11, 1980
Flockenhaus et al. (Flockenhaus)	4,259,312	Mar. 31, 1981
Kimura et al. (Kimura '749)	4,273,749	Jun. 16, 1981
Takahashi et al. (Takahashi)	4,273,748	Jun. 16, 1981
Shah et al. (Shah)	4,476,683	Oct. 16, 1984
Babu et al. (Babu)	4,699,632	Oct. 13, 1987
Deinert	4,779,412	Oct. 25, 1988

Ahland et al. (Ahland)	4,833,877	May 30, 1989
Bissett et al. (Bissett)	5,069,685	Dec. 03, 1991
Ayala	5,188,811	Feb. 23, 1993
Brown et al. (Brown)	5,220,782	Jun. 22, 1993
Rehmat et al. (Rehmat)	5,243,922	Sep. 14, 1993
Nowitzki et al. (Nowitzki)	5,391,530	Feb. 21, 1995
Masuo Inaba et al. (Masuo)*	64-15135	Jan. 19, 1989

*Japanese reference, English translation

Krishnan et al. (Krishnan), “Study of Ammonia Removal in Coal Gasification Processes”, SRI International, Sep. 1998.

Copperthwaite et al. (Copperthwaite), “Cobalt Chromium Oxide: A Novel Sulphur Tolerant Water-Gas shift Catalyst”, Applied Catalysis 63 L11-L16, 1990.

Claims 24, 26, 28-34, and 38 stand rejected under 35 U.S.C. § 103 as being unpatentable over Rehmat, Bissett, Flockenhaus, Suggitt, Aldridge, Shah, Ayala, Krishnan, Copperthwaite, Deinert, the Kimura patents, Takahashi, Graboski, Babu, Ahland, and the admitted state of the prior art as set forth on pages 1 and 2 of appellants’ application.

Claim 27 stands rejected under 35 U.S.C. § 103 as being unpatentable over Rehmat or Bissett, taken with Flockenhaus, Suggitt, Aldridge, Shah, Ayala, Krishnan, Copperthwaite, Deinert, the Kimura patents, Takashi, Graboski, Babu, Ahland, and the admitted state of the prior art as set forth on pages 1 and 2 of appellants’ application as applied to claims 24, 26, 28-34 and 38 above, and further in view of Brown.

Claims 35 and 36 stand rejected under 35 U.S.C. § 103 as being unpatentable over Rehmat or Bissett, taken with Flockenhaus, Suggitt, Aldridge, Shah, Ayala, Krishnan, Copperthwaite, Deinert, the Kimura patents, Takahashi, Graboski, Babu, Ahland, and the admitted state of the prior art set forth on pages 1 and 2 of appellants’ application as

applied to claims 24, 26, 28-34 and 38 above, and further in view of Nowitzki and Japanese Patent 64-15135.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper no. 14, mailed March 8, 1997), for the examiner's complete reasoning in support of the rejections, and to the appellants' brief (Paper no. 13, filed March 10, 1997), for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to every applied prior art reference, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we reverse the rejections made by the examiner.

I. The Art Rejections

As correctly pointed out by appellants throughout their brief, none of the art references teach or suggest their claimed three stage process for ammonia decomposition, in the claimed sequence. Claim 24 requires a three stage process, in the sequence claimed. Claim 38 recites (1) a water-gas-shift and methanation stage and (2) an ammonia decomposition stage, in the sequence claimed, which is also not taught or suggested by the applied art.

The examiner argues that appellants "do not truly have a three stage process for ammonia removal". (answer, page 7). We disagree with the examiner's interpretation of appellants' claims in this regard. Claim 24 requires a three stage process, in the sequence claimed. While we recognize that

appellants' claim 38 requires (1)a water-gas-shift and methanation stage, followed by (2) an ammonia decomposition stage, claim 38 requires such in the claimed sequence. The sequence of stages in either claim 24 or claim 38 facilitates ammonia decomposition as described on page 5, line 32 through page 6, line 28 of appellants' specification.

Some of the references applied by the examiner may show that each stage is individually known in the art. For example, Graboski recognizes that both water-gas-shift and methanation can occur in reactor **30** simultaneously (column 5, lines 47-59). Yet, Deinart does not teach or suggest to one skilled in the art to incorporate the disclosed NH_3 decomposition stage into the water-gas-shift and methanation stage of Graboski, in the order set forth in claim 24 or in claim 38. We cannot find such suggestions in any of the applied references; nor has the examiner explained that such teachings exist in any of the applied references.

These above described circumstances lead us to conclude that the examiner, in making his Section 103 rejections, has fallen victim to the insidious effect of hindsight syndrome wherein that which only the inventor has taught is used against its teacher. W.L. Gore & Assocs. V. Garlock, Inc., 721 F.2d 1540, 1553,
220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). We point out that "[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." In re Geiger, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987). Here, absent hindsight, the skilled artisan would not have found it obvious to conduct appellants' claimed process involving a water gas shift stage, a CO methanation stage, and

a NH_3 decomposition stage, in the claimed sequence (claim 24); or a water gas shift/CO methanation stage, and a NH_3 decomposition stage, in the claimed sequence (claim 38), in view of the applied references.

Hence, we reverse all of the rejections made by the examiner.

II. Other Issues

We note that the examiner's answer is not in accordance with MPEP § 706.02(j). The examiner has completely failed in conforming with guidelines (A)–(D) listed in this section. MPEP
§ 706.02(j), Rev. 1, Feb. 2000.

Furthermore, the multitude of art references applied by the examiner is not in accordance with MPEP § 706.02, CHOICE OF PRIOR ART, BEST AVAILABLE (p 700-10). Prior art rejections should be confined strictly to the best available art. The examiner's rejections have completely failed in conforming with this guideline. MPEP § 706.02, Rev. 1, Feb. 2000.

CONCLUSION

In view of the above, we reverse all of the rejections of record based upon our findings above.

REVERSED

BRADLEY R. GARRIS Administrative Patent Judge	)
THOMAS A. WALTZ Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
Beverly A. Pawlikowski Administrative Patent Judge	)

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